

**REMARKS**

Claims 1-14 are pending in the application. Claims 1, 7, 8, 9, 13 and 14 are amended herein. Entry of the amendments and favorable reconsideration of the application is respectfully requested.

***I. REJECTION OF CLAIMS 8 AND 14 UNDER 35 USC §101***

The Examiner continues to reject claims 8 and 14 under 35 USC §101 as representing non-statutory subject matter. Applicants respectfully request withdrawal of the rejection for at least the following reasons.

Referring to claim 8, the Examiner indicates that the data on the recording medium continues to lack any functionality in relation to the computer. The Examiner states that there is no requisite functionality to satisfy the practical application requirement. The Examiner indicates that claim 8 simply states what a recording medium has, and is not clear whether the claim itself pertains to an apparatus or a method as such.

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MPEP §2106.IV.B.1 explains that a computer-readable medium encoded with a data structure does represent statutory subject matter provided the functional interrelationship between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized is provided.

In an effort to better address the Examiner's concerns and remain in compliance with §2106.IV.B.1, applicants have amended claim 8 (and claim 14) to emphasize further the functionality between the data structure and the computer. Claim 8 has been amended to recite how "the modulated data modulated in accordance with the prescribed modulation rule functions to enable a computer to demodulate the modulated data". Claim 14 has been amended to recite how "the recording start position and the

recording position function to enable a computer to read the data from the recording medium”.

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Accordingly, applicants respectfully submit that claims 8 and 14 provide the functional interrelationship between the data structure and the computer software and hardware components that permit the data structure’s functionality to be realized as required by the MPEP. Applicants respectfully request withdrawal of the rejection.

**II. REJECTIONS OF CLAIMS 1-8 AND 14 UNDER 35 USC §112, 1<sup>st</sup> AND 2<sup>nd</sup> ¶¶**

Claims 1-6 now stand rejected under 35 USC §112, first paragraph, as containing subject matter which was not described in the specification. Somewhat relatedly, claims 1-8 and 14 stand rejected under 35 USC §112, second paragraph, as being indefinite.

Regarding claims 1-6, the Examiner indicates it is not clear what the relationship is being the state-type modulation rule and the digital sum value. The Examiner indicates that the original specification does not describe how the state-type modulation rule uses a digital sum value.

Applicants respectfully submit that the Examiner may have misunderstood the language of claims 1, 7 and 8 as previously amended. The Examiner appears to interpret the “state-type modulation rule” and the “digital sum value” as being equivalent terms. However, such terms are not equivalent. Applicants respectfully submit that such language was clear and fully supported in the present application at page 13, lines 1-11, as pointed out in applicants’ previous response.

Nevertheless, in an effort to avoid any possible misunderstanding, applicants have further amended claims 1, 7 and 8 in order to clarify more that which applicants submit is clearly set forth in the original application.

Particularly, claims 1, 7 and 8 have been amended to recite how the prescribed modulation rule is at least one of

(a): a state-type modulation rule; or

(b): a modulation rule that uses a digital sum value.

In the instance (a) where the prescribed modulation rule is a state-type modulation rule, the at least one parameter value is an initial value of a state. Conversely, in the instance (b) where the prescribed modulation rule is a modulation rule that uses a digital sum value, the at least one parameter value is the initial value or the target value of the digital sum value. Support for such amendment is clearly found in the present application at page 13, lines 1-11, for example.

Accordingly, applicants respectfully submit that the language of claims 1, 7 and 8 relating to the state-type modulation rule, or the modulation rule that uses a digital sum value, is both clear and clearly supported by the original application as filed. The “state-type modulation rule” and the “digital sum value” are not necessarily one in the same as apparently interpreted by the Examiner.

Regarding claims 2 and 3, the Examiner indicates that it is confusing how “state-type modulation rule” and “a digital sum value” are equivalent and can be replaced with another. Again referring to the above, applicants respectfully submit that the present application does in fact describe how the prescribed modulation rule is at least one of (a): a state-type modulation rule; or (b): a modulation rule that uses a digital sum value. In the instance (a) where the prescribed modulation rule is a state-type modulation rule, the at least one parameter value is an initial value of a state. Conversely, in the instance (b) where the prescribed modulation rule is a modulation rule that uses a digital sum value, the at least one parameter value is the initial value or the target value of the digital sum value. Support for such amendment is clearly found in the present application at page 13, lines 1-11, for example.

Regarding claims 8 and 14, the Examiner indicates it is not clear whether the claim is directed to an apparatus, method, or simply a medium having data on it. As is discussed above in relation to the rejection of claims 8 and 14 under 35 USC §101, applicants respectfully submit that claim 8 is clearly directed to a rewritable computer-readable medium. Moreover, the claim recites how the rewritable computer-readable medium has a functional interrelationship between the data structure and the computer software and hardware components that permit the data structure's functionality to be realized

In view of the above clarification and amendments, applicants respectfully submit that claims 1-8 and 14 clearly define the invention and are in fact supported by the original application. Withdrawal of the rejections is respectfully requested.

### **III. REJECTION OF CLAIMS 9-13 UNDER 35 USC §102(b)**

Claims 9-13 remain rejected under 35 USC §102(b) based on *Tanoue et al.* Applicants respectfully request withdrawal of this rejection for at least the following reasons.

*Tanoue et al.* describes an information recording medium and information recording method which prevents the quality of a signal to be reproduced from degradation even when information is repeatedly recorded (see Col. 2, Ins. 21-27). In particular, Fig. 1 of *Tanoue et al.* shows the contents of a sector format of a phase change optical disk. The random shift parameter generator 38 generates, at random, the value J for defining the lengths of the "Gap Field" and "Buffer Field", the value K for defining the lengths of the "Guard 1 Field" and "Guard 2 Field", and the value P for defining the initial signal polarities in the "Guard 1 Field" and "Guard 2 Field". Thereafter, the generated values J, K and P are supplied to the modulator 14 so that recording data is modulated to record information on the basis of a sector format based

on these parameters (see Col. 13, lines 20-29). As a result, degradation in quality of the reproduced signal is reduced.

Nevertheless, *Tanoue et al.* fails to teach or suggest “an offset amount changing section for changing the offset amount of the data recording position from the prescribed reference position such that as data recording proceeds, the offset amount of the data recording position from the prescribed reference position approaches the target value” as recited in claim 9.

As applicants previously argued, although *Tanoue et al.* may teach that the generated values of J, K and P are supplied to the modulator 14 so that recording data is modulated to record information on the basis of a sector format based on J, K and P, this does not represent an “offset amount changing section” as recited in claim 9.

The Examiner admits that *Tanoue et al.* does not teach the word “target value”, but alleges that *Tanoue et al.* discloses a “predetermined value” at Column 2, lines 46-54 that constitutes a “target value”. However, Column 2, lines 46-54 simply discloses that a sum of the lengths of the first nonrecording fields (i.e., gap field) and the second nonrecording fields (i.e., buffer field) always has a predetermined value. This is understandable because the length of the “Gap Field” is determined by  $10+J/16$  and the “Buffer Field” is determined by  $25-J/16$ . Therefore, the sum of the lengths of the first and second nonrecording field remains the same regardless of the value of “J”. Thus, the “predetermined value” referred to by the Examiner is completely unrelated to the “target value” as recited in claim 9.

For example, again the present application explicitly describes how the recording clock generation circuit 230 (e.g., the offset amount changing section) includes a first timing signal generator 236, a second timing signal generator 237, a phase difference detector 238, a filter 239, and a PLL circuit 240. The recording clock generation circuit 230 changes the offset amount of the data recording position with respect to the prescribed reference position such that the offset amount approaches the target value

as the recording of data proceeds. (See, e.g., Spec., p. 33, Ins. 3-6 and p. 37, Ins. 21-31).

Therefore, *Tanoue et al.* fails to teach or suggest each and every feature as recited in claim 9 and the rejection should be withdrawn. Similarly, the rejection of claim 13 should also be withdrawn.

In addition, applicants note that claim 1 of *Tanoue et al.* recites the feature "wherein a recording start position of said actual recording field is set at random". That is, the first start recording position for a series of recording data is shifted at random.

In contrast, as exemplified in Fig. 16 of the present application, the present invention relates to a recording start position for a series of recording data being fixed or otherwise set, and as the recording of the series of data proceeds, a target offset amount is reached. In order to prevent the deterioration due to repeated recordings, the offset amount is appropriately changed. That is, the first start recording position for a series of recording data is fixed or otherwise set, and a recording position for each data included in the series of recording data is offset.

Thus, withdrawal of the rejection with respect to claims 9, 13, and the claims dependent therefrom, is respectfully requested.

#### **IV. CONCLUSION**

Accordingly, all claims 1-14 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

/Mark D. Saralino/

Mark D. Saralino

Reg. No. 34,243

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The Keith Building  
1621 Euclid Avenue  
Nineteenth Floor  
Cleveland, Ohio 44115  
(216) 621-1113